BASIS STATEMENT

Chapter 519

This rule is required by Chapter 500, Public Laws of 1999, which directs the Department to adopt rules setting interim effluent limits for the discharge of mercury. The rule establishes testing requirements and procedures for determining interim effluent limits. There are provisions in the rule for continued testing in order to determine compliance with interim effluent limits. The law also requires persons discharging mercury to develop pollution prevention plans to help reduce discharges of mercury to the waters of the State. The rule provides for implementation of these plans.

These rules were developed using a stakeholder process and were the subject of a public hearing on October 21, 1999. During the hearing, oral comments were provided by five persons, each of whom also furnished written remarks. The comment period remained open through November 1, 1999. Written comments were received from two additional persons. At its meeting on December 2, 1999, the Board reopened the public comment period to receive comments on the proposed removal of Section 4(B)(2) of the rule as originally proposed. The comment period for this change remained open through December 28, 1999, during which a total of 10 letters of comment were received.

When a comment appeared to be addressing a specific provision, but no citation was given, the Department has attempted to link the comment with the appropriate section of the rule. In some cases, the Department has combined one or more similar comments. A list of the persons commenting appears at the end of this statement. The number assigned to each person is referenced at the end of individual comments

GENERAL COMMENTS

Comment: The Department's stakeholder process was efficient and productive. The process allowed for consideration of various points of view and concerns with the discharge of mercury. (1, 2, 4 and 5)

Response: No change necessary.

Comment: There is general support for the goal of controlling mercury discharges in Maine in order to help remove fish consumption advisories presently in force for all inland waters. Further, it is important that Maine uphold its commitment to regional and national goals of reducing mercury releases to the environment. (1 and 5)

Response: No change necessary.

Comment: The pulp and paper industry in Maine has initiated a proactive pollution prevention effort for mercury, and has achieved significant reductions in mercury discharges. One mill was recently was recognized by the Governor for excellence in pollution prevention. (4)

Response: No change necessary.

Comment: There is a need for flexible and reasonable administration of the rule. (5)

Response: No change necessary.

Comment: The intent of the rule is to maintain existing level of mercury in each discharge while the Department develops recommendations to the legislature for new water quality criteria. Nothing in this rule will help provide information on mercury concentrations in Maine rivers or the impact of discharges. The rule will not help define seasonal fluctuations in mercury concentrations caused by natural or manmade sources. The Department should undertake comprehensive sampling of selected rivers to determine if discharge sources have measurable effects on ambient mercury. (6 and 7)

Response: These comments pertain more to the legislative requirement that the Department recommend new water quality criteria than with the establishment of interim effluent limits. The Department will consider these suggestions in conjunction with its work to prepare recommendations for new water quality criteria. The recommendations will be based on ecological and human health risk evaluations. The effluent sampling done pursuant to this rule will help provide information on how discharges affect ambient concentrations of mercury.

Comment: There is no evidence that any Maine river is exceeding EPA recommended water quality criteria for mercury. (7)

Response: Although specific numeric criteria recommended by EPA may not be exceeded, all inland waters in the State do have fish consumption advisories for mercury.

COMMENTS ON SPECIFIC SECTIONS OF THE RULE

Section 1 A

Comment: Allowing a licensee with multiple discharge points to do representative sampling is practicable and reasonable. (4)

Response: No change necessary.

Section 1 B

Comment: There were several comments concerning preparation of pollution prevention plans and progress reports that are to be made to the Department. One comment suggested that adoption of the rule be delayed until the Department finishes preparation of model pollution prevention plans. (2) Another suggested that licensees should not have to submit pollution prevention plans until June 15, 2000. (6 and 7) An implementation progress report is due on December 15, 1999, and this date is too soon to be meaningful in light of the fact that model plans are not yet completed. It was suggested that the rule be clarified to state that substantive progress is not expected in the first report. (2, 4, 5, 6 and 7)

Response: In Chapter 500, the law establishes the reporting dates used in this section of the rule. The law does requires the Department to have prepared the model plans not later than December 31, 1999; however, discharge sources are required to submit reports regarding implementation of pollution prevention plans by December 15, 1999. Accordingly, the Department anticipates that the first reports will generally not contain detailed information

and will be limited to statements of initial actions and how licensees intend to proceed. The rule allows a licensee 90 days to develop a pollution prevention plan after receiving the model plan from the Department. This amount of time should generally be adequate for preparation of plans in most cases. However, the rule does provide for additional time if warranted by the complexity of an individual situation.

Comment: The Department should prepare educational materials on the sources of and controls for mercury. The Department is in a better position and has more resources than individual municipalities to produce effective educational and mass media materials. The Department has done this for other pollution prevention programs with good results. Additionally, the Department should work at the state levels with various interest groups to develop sector-specific pollution prevention programs for statewide use, and provide statewide educational programs prior to requiring the submittal of pollution prevention plans. (3, 6 and 7)

Response: The rule does not specifically address the content or process for developing pollution prevention plans. The law does, however, require the Department to prepare model pollution prevention plans in addition to interim effluent limits. These comments are helpful to the Department and will be included in the process of completing the model plans. A separate stakeholder group is advising the Department on the pollution prevention plans.

Comment: In support of pollution prevention plans at the local level, the Department should, through its rule-making authority establish uniform, state-wide pretreatment standards for the discharge of mercury from private users into public sewer systems. (3)

Response: The Department does not believe that adoption of statewide pretreatment standards for the discharge of mercury would be of significant value in supporting compliance with interim limits. Typically, pretreatment standards are uniform for all members of a specific group, with the intent of attaining the same regulatory result in each case. This rule sets individual interim effluents limits for each licensee. Consequently, a single pretreatment standard would not be appropriate to address compliance problems in all situations. In some cases, it might not be adequate to address a problem, while in others it may be unnecessarily restrictive. The imposition of pretreatment standards for the purposes of bringing a discharge into compliance with an interim limit will need to be considered on a case-by-case basis. This necessarily must be done at the local level. The Department is not aware of any national pretreatment standards for mercury.

Comment: Where effluent concentrations are already very low, the rule should provide for less intensive pollution prevention plans since they have substantially less, if any, remaining pollution prevention opportunities. (4)

Response: The level of effort for designing and implementing a pollution prevention plan is best done at the individual licensee level. A high volume, low concentration discharge may discharge a greater quantity of mercury than a small volume source having a higher effluent concentration. In both situations, a review of specific chemical use or contributors to a public sewer may identify opportunities to reduce sources of mercury.

<u>Section 3 A</u>

Comment: The rule specifies the use of EPA Method 1669 for the collection of "clean" samples for required mercury testing. Method 1669 is very rigorous and is not really adaptable to sampling at some wastewater discharges or from sewer pipes. Many wastewater treatment facilities are not trained or equipped to do this sampling. There may be safety concerns in some cases. (3, 6 and 7)

Response: Method 1669 may be used for sampling of ambient waters or discharges sources and can be adapted to fit specific situations. The Department has adapted and verified the method for sampling of wastewater treatment facility effluents, and has conducted training on several occasions on proper sample collection for mercury testing. The Department has collected samples at most facilities subject effluent testing requirements under this rule. The sampling program includes quality assurance work to demonstrate the validity of the samples and has provided an opportunity for on-site training of facility operators. The rule specifies that sampling and testing is to be done "in accordance with instructions provided by the Department", and these instructions are primarily for sample collection methods. However, a licensee may if necessary or desired develop another adaptation of Method 1669, including demonstrated quality assurance.

Comment: The requirement that test results be submitted to the Department within 10 business days of availability is an unnecessary burden. Results should be submitted with monthly discharge monitoring reports sent to the Department (4); alternately, 15 business days should be allowed for the submission of rest results. (6 and 7)

Response: The timely submission of all monitoring reports is important for the Department to review and respond to test results as necessary. Mercury tests conducted under this rule are "non-routine", the receipt of which may not coincide with routine monitoring reports for other parameters. The Department believes that 10 business days are adequate to allow the licensees a reasonable time to review test reports before forwarding to them to the Department.

<u>Section 3 B</u>

Comment: Commenters recommended both more and fewer tests be required; these comments were not specific and may also apply to compliance testing required by section 7. In arguing for more tests, it was noted that a greater number of tests would result in effluent limits being more statistically reliable. (1) It was also pointed out that wastewater discharges represent only a relatively small quantity compared to other sources of mercury released to the environment, principally through air emissions. Consequently, monitoring frequencies should be reduced to those already required by State discharge licenses. (2)

Response: The number of tests to be required is subjective. More tests do result in more representative effluent limits and provide for better compliance monitoring. However, the cost of conducting tests is a practical consideration. Testing requirements were discussed at some length in stakeholder meetings during development of the proposed rule. Mercury testing is presently required only for those licensees subject to Chapter 530.5 of the Department's rules (Group I in section 1 C of this rule). For many of those licensees, only 1-2 test results are available, and continued monitoring is most often at the rate of only once per year. Other licensees are required to do no mercury testing. The Department believes

that testing requirements in the rule as originally proposed are a reasonable balance between the cost of testing and the need to obtain reliable information.

Comment: In lieu of all licensees being required to conduct mercury sampling, the Department should select approximately 20 facilities that have the training, experience and equipment to sample for mercury by Method 1669. The State should pay for analysis of the samples. (6 and 7)

Response: The law requires that individual interim effluent limits be developed for all facilities subject to the rule. Sampling at a relatively few licensees would not provide the information necessary to accomplish this statutory requirement.

Section 3 D

Comment: Allowing use of all previous tests done by Methods 1669 and 1631 is practical and reasonable. (4)

Response: No change necessary.

Section 3 E

Comment: The data used to set interim effluent limits should be collected over different seasons as concentrations may change with each season of the year. Licensees should be given until December 30, 2000 to collect four samples with which interim effluent limits would then be set. (6 and 7)

Response: The Department has required licensees to use the test methods referred to in the rule since July 1998 where they have had to do mercury testing for other regulatory requirements. Some licensees have completed the four tests required by the rule. The results of these tests as well as testing conducted by the Department have not indicated seasonal variations. It is possible that additional testing at individual facilities may suggest seasonal variations. In those cases, the rule provides in Section 6 a means to adjust interim effluent limits as necessary. Requiring another year of sampling is not consistent with the legislative intent of promptly setting effluent limits.

Section 4 B

Comment: The method used to calculate average interim effluent limits is fair and scientifically reasonable. (1)

Response: No change necessary.

Comment: The use of a minimum default value as an average interim effluent limit is practical and reasonable. (4)

Response: No change necessary.

Comment: Comments were received both supporting and rejecting the use of a daily maximum interim effluent limit. The use of maximum limits would ensure that individual high test results will be investigated and steps taken to control large mercury releases. (1) In opposition, the daily maximum is less scientifically set and may result in a determination of non-compliance that may be a lab error other anomaly. (4 and 5)

Response: The Department believes that maximum limits are appropriate and important to support the legislative goal of reducing mercury discharges where possible. The limits would be set using the statistically determined average and a multiplier. In the event that non-compliance is found with a single test, the initial response, pursuant to section 7 C, will be to do additional testing to determine if the test is a limited incident or a continuing trend. If the non-compliant test is shown to an isolated event, in most cases no further action other than testing would be necessary. In other comments, municipalities have pointed out that local ordinances may not provide sufficient authority for imposition of controls on discharges of mercury from private sources into a public sewer system. Under State law, the Department may assist municipalities in such situations where there is a violation of a license limit or other adverse impact of a discharge to a public sewer. The inclusion of maximum effluent limits for mercury may in some circumstances be useful as a foundation for State assistance in controlling mercury discharges where the source is uncooperative at the local level.

Through reopening of the record, substantial comments were received on removal of section 4(B)(2) from the rule. As originally proposed that section read, "In the event that the interim average effluent concentration as calculated above is less than 4.5 ng/L for an individual licensee, that licensee will be assigned an interim average effluent limit of 4.5 ng/L". All commenters recommended that this "minimum default value" be retained in the rule. Following is a summary of the comments received on this provision.

Comment: The rule was developed through a stakeholder process and the minimum default value is an integral part of the rule. It would be improper to remove one important part of the rule resulting from the stakeholder process. (9, 10, 11, 12, 13, 14 and 15)

Comment: No negative comments on the minimum default value were received during the initial comment period. (9, 12, 13 and 14)

Comment: The intent of the legislation supporting this rule is to limit the discharge of mercury to concentrations found in ambient waters; requiring lower effluent concentrations is inconsistent with that intent. (8 and 10)

Comment: There is nothing in the law that precludes consideration of other factors in setting interim effluent limits for mercury. (12)

Comment: The minimum default value is extremely conservative and represents trace levels of a naturally occurring element. Discharges at or below the minimum default value will not degrade the waters of the State and represent only a small contribution to total mercury loadings. (9, 11, 12, 15, and 17)

Comment: Measured in parts per trillion, the minimum default value is a very low concentration. Laboratory tests below this level may be subject to significant analytical variability, especially for complex effluents. Low level variability diminishes the reliability and defensibility of the decision making process and the resulting effluent limitations. (9, 11, 15, 16 and 17)

Comment: The interim effluent limits are based on a relatively small number of samples. A conservative approach should be used when considering whether the existing data are representative of a discharge, especially at very low concentrations where analytical variations may be more significant. Limited test data may not encompass all of the expected variations that may be detected through further testing. The minimum default value will help to avoid non-productive efforts to pursue exceedences of very low limits due to these variations. (12 and 14)

Comment: The minimum default value in the rule will not result in backsliding or increases in mercury discharges. Licensees have every incentive to reduce mercury discharges. Notwithstanding the minimum default value, all licensees will still have to develop and implement mercury pollution prevention plans. (11, 12, 13, 14, 15 and 17)

Comment: Previous pollution efforts have eliminated most or all sources of mercury and making further efforts to control very low levels will be unsuccessful. Removal of the minimum default value may lead to technical violations, and there are no practical actions to address these incidents. (8)

Comment: Removal of the minimum default value would create an artificially low standard that unfairly targets the licensees that have the lowest mercury concentrations. Discharge sources with higher effluent concentrations or greater variability will receive higher interim effluent limits. The intent of interim effluent limits is to quantify current discharges and to ensure that larger discharges are addressed. The Department has expressed the desire to address the "low hanging fruit" by controlling large mercury discharges. The focus of the Department's efforts and limited resources should be on that goal. (10 and 14)

Comment: It is unrealistic and unfair to expect discharge levels to be consistently below ambient water concentrations. The minimum default value is a reasonable approach to avoid penalizing discharge sources that have very low concentrations through proactive actions they have already been taken. It was not the legislature's intent to set facilities with the lowest discharge concentrations in the State up to fail, but this is what removal of the minimum default value would do. (12 and 13)

Comment: The quantities of mercury discharged by point sources is insignificant when compared to contributions from atmospheric deposition. State resources should be targeted on sources where the most reduction in mercury can be obtained. (11, 15, 16 and 17)

Comment: The minimum default value represents ambient levels of mercury and discharges at this level cannot be reasonably seen as increasing ambient concentrations of mercury. Many licensees have already made considerable efforts to reduce mercury discharges and further efforts do not have a real potential for environmental benefits. (16)

Response: These comments raise several valid points, and support retaining section 4(B)(2) in the rule.

<u>Section 4 C</u>

Comment: The Department should consider certain factors in the law in the process of establishing an effluent limit. These factors include water conservation, seasonal variations and production changes. (4)

Response: The original language in this section was intended to accomplish this goal. However, it did so by allowing a licensee to submit information in response to a limit developed by the Department. The rule has been revised to add a new paragraph to subsection 4 B allowing consideration during establishment of a limit. The Department notes that the statistical methods used to set limits will recognize effluent variability due to these and other factors to the extent that they are reflected in the test sample results. However, past tests may not be representative of all situations or future conditions; additional information submitted by the licensee may result in more or less effluent variability.

Section 6 A

Comment: The wording of the paragraph addressing "Production changes" does not exactly track that in the law in that the rule discusses different *types* of production, as opposed to *levels* of production in the law. The intent of this difference should be clarified. (4)

Response: The rule is changed to include both levels and types of production. The Department believes that either the level or type of production may affect mercury discharges. A new business locating in a community may constitute a new source of mercury that cannot be completely controlled through pollution prevention plans. Conversely, a reduction in production may result in less mercury being discharged.

Section 7 C

Comment: The last paragraph of this section is inconsistent with the Legislature's intent that this not be a "heavy hammer program", and should be removed from the rule. (4)

Response: The rule describes what steps normally would be taken in the event of non-compliance. Aside from the provisions of this rule, the department has other statutory authorities and responsibilities to ensure that all of the laws it administers are equitably enforced. While the Department anticipates that the steps outlined in this section will generally be effective in controlling mercury discharges, situations may arise where discharge sources do not act in a timely or responsible manner or extenuating circumstances exist. In such cases, it may be necessary for the Department to consider other measures. The language in the rule simply acknowledges the avenues available, and is an appropriate clarification in conjunction with the specific responses described in the rule.

List of Commenters.

Oral and written comments pursuant to public hearing

1. Nick Bennett, Natural Resource Council of Maine
2. Bradley Moore, City of Bangor and representing the Maine Wastewater Control Association
3. Vivian Matkivich, Lewiston-Auburn Water Pollution Control Authority and representing the Maine Wastewater Control Association
4. Mic LeBel, Maine Pulp and Paper Association
5. Christopher Hall, Maine Chamber and Business Alliance

Written comments pursuant to public hearing

6. William Ball, Acheron, Inc.
7. Houlton Water Company, remarks prepared by Laura Armstrong Reed and William Ball of Acheron, Inc.

Written comments pursuant to reopened record

8. William Bowie, Pratt & Whitney
9. William Zarolinski, Lotic Inc. Environmental Consultants
10. Christopher Hall, Maine Chamber and Business Alliance
11. Bradley Moore, City of Bangor
12. Mic LeBel, Maine Pulp and Paper Association
13. Ken Gallant, Champion International Corp.
14. Robert Deabay, Great Northern Paper, Inc.
15. Clayton Richardson and Bradley Moore, Maine Wastewater Control Association
16. Clayton Richardson, Lewiston-Auburn Water Pollution Control Authority
17. Scott Clukey, Brewer Water Pollution Control Facility